Climate System and Water Cycle

YOSHIMURA LAB.

Climate System and Water Cycle

Department of Human and Social Systems Large-scale Experiment and Advanced-analysis Platform

Isotope Meteorology

Department of Civil Engineering, Graduate School of Engineering /

Department of Natural Environmental Studies, Graduate School of Frontier Sciencesl

Y-Lab contributes to the society by understanding of climate and water cycle.



https://isotope.iis.u-tokyo.ac.jp

We study the Earth from viewpoints of climate, water, and isotopes to make contributions to understanding of climate system and prevention of water-related disasters.

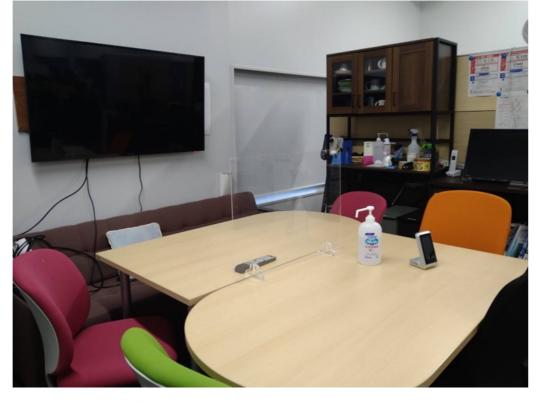
Where we are

Y-Lab is located in the LEAP of Institute of Industrial Science in Kashiwa campus.



Office

There are some opportunities which Y-lab members can gather and discuss intensively.

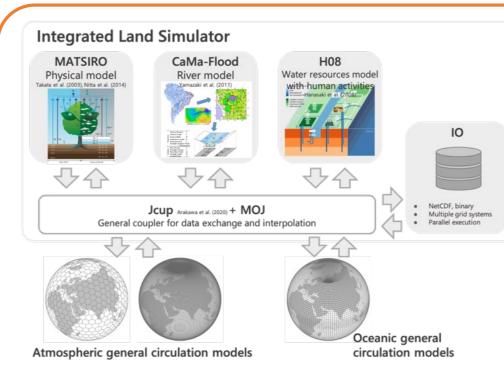


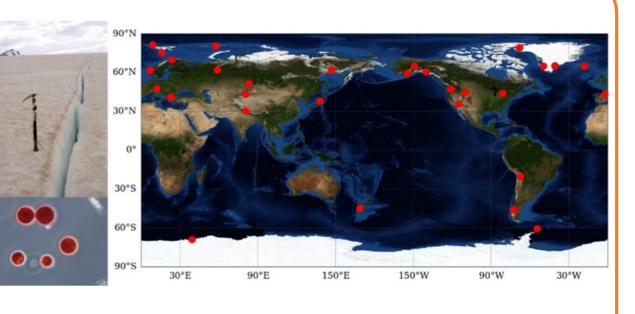
Reception Space Lab members often take a rest and chat with others here.



What we do

Climate





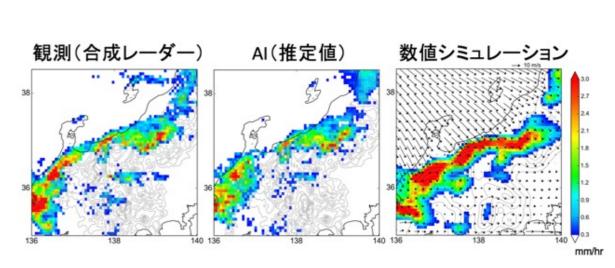
Integrated Land Simulator(ILS)

Developing a snow algae model to reconstruct blooming worldwide

Provision of useful information for climate change through understanding climate system using model development and its application

Water Cycle



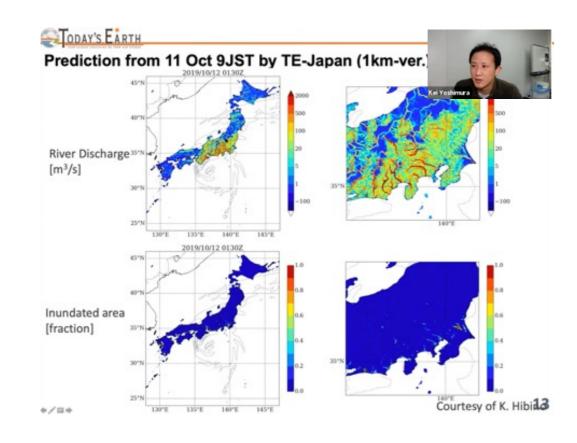




Open Campus

Visualization of water cycle with spherical display helps visitors understand research topics.

Isotope Experiment Room Y-Lab is fully equipped with experimental instruments including mass and laser spectrometers.



Academic Conferences

Y-Lab members actively make presentations at academic conferences and share our results.



International Members

Members from various countries have lively discussions on their research topics.

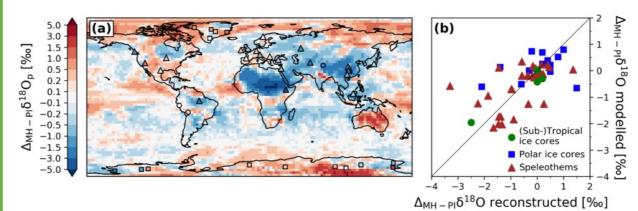
Real-time numerical flood prediction by "Today's Earth" system

Estimation of local precipitation based on numerical simulation with AI

Contribution to world water resource management and disaster mitigation through representation and prediction of water cycle based on model development and its application

Isotope

Modelled δ^{18} O in precipitation and comparison with data (MIROC5-iso)



In Antarctica (2003)

In the past climate (~6,000 years ago)

Development of methods for climate reconstruction and improvement of model accuracy with isotope and seeking better understanding of climate system

